

IN THE ABSTRACT:

Please delete the original abstract, and substitute the attached abstract of the disclosure therefor.

PCB 4,124,384
BAPV 4,96,345
BAPV 4,039,385
Digoxin 4,193,983

Biotin-~~overglue~~ - ~~allegin~~

IN THE CLAIMS:

Please amend the claims as follows:

39. (Once Amended) A conjugate, comprising a polymeric carrier having a maximum of 100 monomeric units which contains [1-10] 2-10 hapten molecules and [1-10] 2-10 marker groups or solid phase binding groups which are coupled to reactive side groups at predetermined positions on the polymeric carrier, wherein the monomeric units are selected from at least one of nucleotides, nucleotide analogues, amino acids and peptide nucleic acids, and wherein the hapten molecules and the marker groups or solid phase binding groups are different from each other.

40. (Once Amended) [A] The conjugate as claimed in claim 39, [comprising a polymeric carrier having a maximum of 100 monomeric units which contains 1-10 hapten molecules and 1-10 marker groups or solid phase binding groups which are coupled to reactive side groups at predetermined positions on the polymeric carrier,] wherein the monomeric units are amino acids and the marker groups or solid phase binding groups are luminescent metal chelates.

41. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the polymeric carrier has 3-80 monomeric units.

42. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the polymeric carrier has 5-60 monomeric units.

43. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the conjugate contains [1-6] 2-6 hapten molecules.

44. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the conjugate contains 2-8 marker groups or solid phase binding groups.

49. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the reactive side groups are at least one of reactive amino side groups and reactive thiol side groups.

51. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the conjugate contains solid phase binding groups which are selected from the group consisting of biotin and biotin analogues.

55. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein each of the hapten molecules is an immunologically reactive molecule having a molecular mass of 100-2000 Daltons.

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56. (Once Amended) The conjugate as claimed in claim 55, wherein the hapten molecules are selected from the group consisting of pharmacologically active substances, hormones, metabolites, vitamins[, mediators] and neurotransmitters.

57. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the hapten molecules are immunologically reactive peptide epitopes having a length of up to 30 amino acids.

58. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the hapten molecules are nucleic acids having a length of up to 50 nucleotides.

59. (Once Amended) The conjugate as claimed in [one of claims] claim 39 [and 40], wherein the hapten molecules are peptide nucleic acids having a length of up to 50 monomeric units.

60. (Twice Amended) A process for producing a conjugate comprising a polymer carrier having a maximum of 100 monomeric units which contains 1-10 hapten molecules and 1-10 marker groups or solid phase binding groups which are coupled to reactive side groups at predetermined positions on the polymeric carrier, wherein the monomeric units are selected from at least one of nucleotides, nucleotide analogues, amino acids and peptide nucleic acids, and wherein the hapten molecules and the marker groups or solid phase binding groups are different from each other, the process comprising

synthesizing the polymeric carrier on a solid phase by linking together monomeric units, at least some of which contain side groups which are reactive under different conditions [containing protecting groups], wherein at least one of the following steps (a) and (b) is conducted in the process:

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(a) [a plurality of] monomeric units to which are covalently bound [coupled to] at least one of hapten molecules and marker groups or solid phase binding groups [and, during said synthesizing step, the plurality of monomeric units] are introduced [onto] into the polymeric carrier at predetermined positions [on] in the polymeric carrier; and

(b) after said synthesizing step, [cleaving the protecting groups and thereafter at least] one of activated hapten molecules and marker groups or solid phase binding groups [are] is coupled to one of the reactive [primary amino or thiol] side groups of the polymeric carrier at the predetermined positions on the polymeric carrier.

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62. (Once Amended) The process as claimed in claim 60, wherein in step (a), the [plurality of] monomeric units are [coupled] covalently bound to the at least one of hapten molecules and marker groups or solid phase binding groups via primary amino groups or thiol groups.

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64. (Once Amended) The process as claimed in claim 60, wherein in step (b), the [at least] one of activated hapten molecules and marker groups or solid phase binding groups [are] is coupled to primary amino side groups of the polymeric carrier, wherein a monomeric unit having a first protecting group for the primary amino side groups is used at the predetermined positions on the polymeric carrier at which the hapten molecules are

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to be coupled and a monomeric unit having a second protecting group for the primary amino side groups is used at predetermined positions on the polymeric carrier at which the marker groups or solid phase binding groups are to be coupled, and the first protecting group and the second protecting group are selected in such a way as to enable the first protecting group and the second protecting group to be selectively cleaved.

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66. (Once Amended) In an immunological method in which an immunologically reactive molecule is incubated with an immunological binding partner to be determined in a competitive or non-competitive immunoassay and any immunological binding in the immunoassay is correlated with the presence or amount of the immunological binding partner, the improvement comprising using the conjugate as claimed in [one of claims] claim 39 [and 40] as the immunologically reactive molecule, wherein the hapten molecules are immunologically reactive.

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67. (Once Amended) In a nucleic acid diagnostic method in which a detection molecule is incubated with a nucleic acid to be determined and any binding between the detection molecule and the nucleic acid to be determined is correlated with the presence or amount of the nucleic acid to be determined, the improvement comprising using the conjugate as claimed in [one of claims] claim 39 [and 40] as the detection molecule, wherein the hapten molecules comprise nucleic acid and the detection molecule is capable of hybridizing with the nucleic acid to be determined.

Please add the following new claim.